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(12) **United States Patent**
Keshavaraj(10) **Patent No.: US 6,294,487 B1**(45) **Date of Patent: Sep. 25, 2001**(54) **AIRBAG FABRIC PROCESSING VERY LOW COVER FACTOR**(75) **Inventor: Ramesh Keshavaraj, LaGrange, GA (US)**(73) **Assignee: Milliken & Company, Spartanburg, SC (US)**(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.(21) **Appl. No.: 09/405,999**(22) **Filed: Sep. 24, 1999**(51) **Int. Cl.⁷ B32B 5/08**(52) **U.S. Cl. 442/218; 280/728.1; 428/34.3; 428/34.5; 428/34.6; 428/34.7; 428/36.1; 442/76; 442/152; 442/158; 442/164; 442/168; 442/181; 442/203**(58) **Field of Search 280/728.1; 428/34.3, 428/34.5, 34.6, 34.7, 36.1; 442/76, 152, 158, 164, 168, 181, 203, 218**(56) **References Cited****U.S. PATENT DOCUMENTS**

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ABSTRACT

The present invention relates to an airbag fabric which is woven in such a manner as to possess a cover factor of less than about 1900 but which simultaneously, through the presence of a film (laminate) or coating, possesses an extremely low air permeability. The utilization of such a loosely constructed fabric within airbag cushions has heretofore not been possible, even with the application of standard airbag coatings (such as silicones) over the fabric surface since such coatings with not easily remain in contact over the loosely constructed fabric surface (i.e., the coating would leak through the fabric). The coupling of a low cover factor fabric with a laminate film (or with a coating wherein the cover factor is at least 1600), however, solves such a problem and permits the utilization of inexpensively produced woven fabrics within airbag applications.

20 Claims, No Drawings